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1	US 20050020237 A1	20050127	10	Method and apparatus for transmitting signals in a multi-antenna mobile communications system that compensates for channel variations	455/403	455/562.1
2	US 20040264603 A1	20041230	12	Methods and systems for estimating a channel response by applying bias to an initial channel estimate	375/340	
3	US 20040247054 A1	20041209	17	Method and device for the fourth-order, blind identification of an under-determined mixture of sources	375/340	
4	US 20040213360 A1	20041028	23	Deferred decorrelating decision-feedback detector for supersaturated communications	375/340	
5	US 20040204113 A1	20041014	20	Adaptive antenna base station apparatus	455/562.1	455/561
6	US 20040198452 A1	20041007	24	Array receiver with subarray selection	455/562.1	455/133; 455/137; 455/273
7	US 20040198393 A1	20041007	27	Radio transceiver and method of controlling direction of radio-wave emission	455/456.1	455/456.2; 455/562.1
8	US 20040196929 A1	20041007	18	Signal processing apparatus and method	375/340	
9	US 20040185909 A1	20040923	10	Linear transformation of symbols to at least partially compensate for correlation between antennas in space time block coded systems	455/562.1	
10	US 20040157646 A1	20040812	28	Method and apparatus for adaptive transmission beam forming in a wireless communication system	455/562.1	455/63.4
11	US 20040127260 A1	20040701	37	Determining a spatial signature using a robust calibration signal	455/562.1	
12	US 20040102157 A1	20040527	9	Wireless LAN with distributed access points for space management	455/63.4	455/562.1

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3	Ferreol, Anne et al.
4	McElwain, Thomas P.
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6	Roy, Sebastien Joseph Armand
7	Hamada, Hajime et al.
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9	Alexiou, Angeliki et al.
10	Raleigh, Gregory Gene et al.
11	Boros, Tibor et al.
12	Lewis, Michael E.

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13	US 20040087308 A1	20040506	19	Data transfer method in radio system	455/445	455/450; 455/562.1
14	US 20040087275 A1	20040506	24	System and method for antenna diversity using joint maximal ratio combining	455/61	455/103; 455/105; 455/272; 455/273; 455/276.1; 455/562.1
15	US 20040043794 A1	20040304	24	Radio communication apparatus	455/561	455/562.1
16	US 20040023691 A1	20040205	7	Simple smart-antenna system for MUD-enabled cellular networks	455/561	455/562.1
17	US 20040018818 A1	20040129	9	Method for controlling the weighting of a data signal in the at least two antenna elements of a radio connection unit, radio connection unit, module and communications system	455/78	455/562.1; 455/575.7
18	US 20040014433 A1	20040122	29	Radio transceiver and method of controlling direction of radio-wave emission	455/101	455/562.1
19	US 20040002364 A1	20040101	36	Transmitting and receiving methods	455/562.1	455/550.1; 455/553.1; 455/575.7; 455/95
20	US 20030130012 A1	20030710	16	Method and device for evaluating an uplink radio signal	455/562.1	455/561
21	US 20030125091 A1	20030703	15	Signal processing method and apparatus for obtaining diversity gain in wireless communication system equipping antenna array	455/562.1	455/136
22	US 20030100343 A1	20030529	114	Communications system and method	455/562.1	

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17	Hottinen, Ari et al.
18	Hamada, Hajime et al.
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20	Brunner, Christhoper et al.
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23	US 20030086510 A1	20030508	12	Method and device for the detection of sources in a communications system	375/340	
24	US 20030073464 A1	20030417	18	Space-time coded transmissions within a wireless communication network	455/562.1	455/561; 455/82
25	US 20030022695 A1	20030130	8	Radio station with closed-loop transmission diversity, and process for controlling transmission from such a station	455/562.1	455/560; 455/82
26	US 20030012314 A1	20030116	8	Channel tracking using channel covariance estimation	375/346	375/340
27	US 20020193146 A1	20021219	35	Method and apparatus for antenna diversity in a wireless communication system	455/562.1	375/347; 455/101; 455/272
28	US 20020122508 A1	20020905	9	Signal processing method and device for a spread spectrum radio communication receiver	375/340	
29	US 6850741 B2	20050201	22	Method for selecting switched orthogonal beams for downlink diversity transmission	455/101	342/359; 342/367; 455/562.1; 455/63.4
30	US 6839573 B1	20050104	24	Apparatus and method for beamforming in a changing-interference environment	455/562.1	455/114.1
31	US 6829312 B1	20041207	8	Iterative projection with initialization using a network user identifier	375/340	375/347
32	US 6754261 B1	20040622	34	System, device, and method for determining the sampling time for a time-domain equalizer	375/232	375/231; 375/340; 375/344; 375/350
33	US 6745050 B1	20040601	27	Multichannel multiuser detection	455/561	370/342; 455/562.1

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24	Giannakis, Georgios B. et al.
25	Homsi, Hassan El Nahas El
26	Krupka, Eyal
27	Wallace, Mark et al.
28	Jard, Alexandre et al.
29	Lei; Zhongding et al.
30	Youssefmir; Michael et al.
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34	US 6718184 B1	20040406	12	Method and system for adaptive signal processing for an antenna array	455/562.1	342/367; 342/373; 342/378; 342/383; 455/453; 455/524; 455/525; 455/561
35	US 6674795 B1	20040106	33	System, device and method for time-domain equalizer training using an auto-regressive moving average model	375/231	375/229; 375/232; 375/233; 375/236; 708/323
36	US 6665545 B1	20031216	26	Method and apparatus for adaptive transmission beam forming in a wireless communication system	455/562.1	455/273; 455/63.4
37	US 6654590 B2	20031125	32	Determining a calibration function using at least one remote terminal	455/67.14	370/328; 455/562.1; 455/67.11
38	US 6615024 B1	20030902	35	Method and apparatus for determining signatures for calibrating a communication station having an antenna array	455/67.14	455/562.1; 455/69
39	US 6564037 B1	20030513	39	Multi-user detection for antenna array receivers	455/63.1	342/354; 370/342; 455/562.1
40	US 6522898 B1	20030218	25	Radio communication system	455/562.1	342/383; 455/69
41	US 6501963 B1	20021231	10	Design, fabrication and operation of antennas for diffusive environments	455/562.1	455/63.4
42	US 6477161 B1	20021105	14	Downlink beamforming approach for frequency division duplex cellular systems	370/342	370/281; 370/319; 370/334; 370/344; 375/267; 455/562.1

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35	Liu; Qingli et al.
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39	Sweatman; Catherine Zoe Wollaston Hassell et al.
40	Kohno; Ryuji et al.
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42	Hudson; John Edward et al.

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43	US 6434366 B1	20020813	20	Method and system for estimating adaptive array weights used to transmit a signal to a receiver in a wireless communication system	455/69	342/372; 342/378; 455/101; 455/562.1; 455/67.14; 455/70
44	US 6426973 B1	20020730	13	Differential minimum mean squared error communication signal compensation method	375/231	375/232
45	US 6353731 B1	20020305	12	Method and measurement configuration for measuring the characteristics of radio channels	455/67.11	370/347; 370/349; 455/562.1
46	US 6327314 B1	20011204	31	Method and apparatus for channel estimation for multicarrier systems	375/340	342/378; 375/347; 455/63.1
47	US 6320901 B1	20011120	16	Method for fast off-line training for discrete multitone transmissions	375/222	370/503; 375/231; 375/354; 708/305
48	US 6240098 B1	20010529	27	Method and device for space division multiplexing of radio signals transmitted in cellular radio communications	370/431	342/378; 370/329; 375/346; 455/562.1
49	US 6215983 B1	20010410	113	Method and apparatus for complex phase equalization for use in a communication system	455/63.1	375/324; 375/325; 375/340; 455/303; 455/304
50	US 6141567 A	20001031	23	Apparatus and method for beamforming in a changing-interference environment	455/562.1	375/349; 455/277.2; 455/278.1

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51	US 5999800 A	19991207	61	Design technique of an array antenna, and telecommunication system and method utilizing the array antenna	455/73	342/378; 342/383; 455/277.2; 455/562.1; 455/63.4; 704/226
52	US 5949819 A	19990907	9	Method and apparatus for training linear equalizers in a PCM modem	375/222	375/231
53	US 5914982 A	19990622	9	Method and apparatus for training linear equalizers in a PCM modem	375/222	375/231; 375/233; 375/295
54	US 5761088 A	19980602	18	Method and apparatus for channel identification using incomplete or noisy information	348/614	348/611; 375/224; 375/231; 375/350
55	US 5461640 A	19951024	9	Method and system for optimizing an equalizer in a data transmission system	375/231	708/323
56	US 5436929 A	19950725	16	Decision feedback equalizer device and method for the block transmission of information symbols	375/233	375/261; 375/340; 375/348; 375/349; 708/323; 714/752

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54	Hulyalkar; Samir N. et al.
55	Gatherer; Alan
56	Kawas Kaleh; Ghassan